Issue Editor

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This issue of The Ochsner Journal is dedicated to diabetes mellitus with the hope of offering the reader an appreciation of the rapid integration of both basic and clinical research into the treatment of diabetes.

In his keynote address, Dr. Gerald Reaven, the first to describe the metabolic syndrome or "Syndrome X" in his Bantam Award address in 1988, shares many of the salient issues regarding insulin resistance and reminds us that Syndrome X is not a disease in and of itself but a major risk factor for coronary artery disease (CAD). Insulin resistance contributes to the development of type 2 diabetes and to CAD risk factors in several ways. Dr. Reaven leaves us with the intriguing and testable hypothesis that Syndrome X will soon replace hypercholesterolemia as the major risk factor for CAD.

Dr. Lawrence Blonde's review of the epidemiology of type 2 diabetes stresses that diabetes has become an American epidemic with 16 million American sufferers, of which 90% have type 2 diabetes. Insulin deficiency, in addition to insulin resistance, is required for the development of type 2 diabetes, and improved glucose control improves microvascular and probably macrovascular diseases and may reduce overall heath care costs. Dr. Blonde reviews several studies indicating the high risk of CAD in the diabetes population and supporting Dr. Reaven's hypothesis.

Diabetes patients have an increased risk of developing CAD, and atherosclerosis is the major cause of death in diabetes. In their discussion of the relationship between cardiovascular disease and diabetes, Drs. Basa and Garber point out that, although there is an association between diabetes and CAD, the most effective therapies require cardiovascular risk modifications other than glucose control. These therapies include aggressive lipid management, exercise, weight control, anticoagulation, and blood pressure control. They review the mechanisms involved in atherogenesis and the most recent lipid guidelines and treatment strategies.

"New Therapies for Type 1 Diabetes Mellitus," by members of the Duke University Medical Center Endocrinology Section including Dr. Kandaswamy Jayarag, reviews therapeutic innovations including insulin pump therapy, newer insulins, insulin pens, and new glucose sensing devices. Whether the new long-acting insulins will prove to be as effective as insulin pumps is yet to be determined; however, current practice patterns for type 1 diabetes are likely to change rapidly. Even as new innovations improve our ability to treat diabetes patients, the authors remind us that, "adequate knowledge, understanding, motivation, and compliance are the primary necessities for the efficient management and prevention of chronic diabetes-related complications."

Successful pancreas transplantation can prevent and even reverse diabetic complications and eliminate quality of life issues related to glucose monitoring and insulin therapy. Drs. George Loss and Hani Grewal review pancreas transplantation for type 1 diabetes and describe some of the technical issues related to bladder vs. enteric exocrine drainage and portal vs. systemic endocrine drainage. Additionally, they review recent results in islet cell transplantation. The Ochsner strategy for diabetes care emphasizes education as the cornerstone of therapy. "Improvements for Diabetes Management" stresses the team approach to diabetes care through education, with the goal being greater independence for the diabetes patient. The authors emphasize that diabetes is a chronic disease, and the psychological aspects and positive adjustments required for dealing with chronic illness should not be overlooked. Providers are challenged to be cautious in the use of the term 'noncompliant', and aspects of an ideal diabetes education program are presented along with the status and outcomes of Ochsner's Diabetes Self-Management Education Program.

Drs. Mason and Alexander hypothesize that viruses may precipitate the development of diabetes in a subgroup of patients. They review animal models and human data linking various viruses to hyperglycemia, as well as viral mechanisms that may trigger diabetes in those with a genetic predisposition. There are associations between liver disorders and diabetes and demonstrated relationships between hepatitis C infection and type 2 diabetes.

As the Issue Editor of the July 2001 Ochsner Journal, I would like to thank all the contributors. Dr. Reaven was one of my professors during my Endocrinology training at Stanford, and I had the good fortune to witness part of the evolution of Syndrome X during my training. It is amazing to see not only its acceptance, but also its continuing and evolving importance in the understanding of multiple other diseases including polycystic ovarian disease and nonalcoholic steatohepatitis. Dr. Jayarag and Dr. Basa are the newest members of the Ochsner Endocrinology Section and we welcome their expertise in the field of diabetes.